**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application.

**Listing of Claims:**

Claims 1 – 52: Cancelled

53. (New) A device for thermally treating semiconductor wafers or substrates having at least one silicon layer that is to be oxidized and a metal layer, preferably a tungsten layer, that is not to be oxidized, said device comprising:

at least one radiation source;

a treatment chamber for receiving a substrate, wherein said chamber has at least one wall part located adjacent to the at least one radiation source, and wherein said wall part is substantially transparent for radiation from said at least one radiation source;

at least one cover plate disposed between the substrate and said at least one wall part of said treatment chamber located adjacent to saidat least one radiation source, wherein said at least one cover plate is dimensioned such that it fully covers said transparent wall part of said treatment chamber in relation to the substrate, in order to prevent material, comprising a metal, metal oxide or metal hydroxide, such as tungsten, tungsten oxide or tungsten hydroxide, emitted or evaporated from said substrate from reaching said transparent wall of said treatment chamber; and

a handling device for automatically removing and inserting said at least one cover plate from or into said treatment chamber, wherein said handling device contacts said cover plate only on the surface facing away from the substrate.

54. (New) A device according to claim 53, wherein said at least one cover plate is substantially non-transparent for the radiation of said at least one of radiation source, and/or said at least one cover plate lies loosely on holding elements in said treatment chamber.

55. (New) A device according to claim 53, wherein said handling device for said at least one cover plate is also provided for a loading and unloading of substrates.

56. (New) A device according to claim 53, wherein at least one respective cover plate is disposed above and below the substrate, and/or wherein different cover plates are provided above and below the substrate.

57. (New) A device according to claim 53, wherein a surface of said at least one cover plate facing the substrate is coated, for example by a material that is easy to clean.

58. (New) A device according to claim 53, wherein a light-absorbing plate is disposed between said at least one cover plate and said at least one transparent wall part of said treatment chamber.

59. (New) A device according to claim 53, wherein said at least one cover plate is composed of glass, in particular quartz glass.

60. (New) A device according to claim 53, wherein at least one device is provided for introducing a non-watery, hydrogen containing process gas into said treatment chamber.

61. (New) A device according to claim 60, wherein a control unit is provided for introducing said non-watery, hydrogen containing process gas prior to and/or after introduction of a hydrogen/water mixture.

62. (New) A method for thermally treating semiconductor wafers having at least one semiconductor layer that is to be oxidized, preferably a silicon layer, and a metal layer, for example a tungsten layer, that is not to be oxidized, wherein a semiconductor wafer is disposed in a treatment chamber having at least one radiation source and a wall part located adjacent to

the radiation source, said wall part being substantially transparent for radiation of the radiation source, said method including the steps of:

introducing at least one process gas into said treatment chamber;

heating the wafer, wherein material emitted from or evaporating from the wafer comprises a metal, metal hydroxide or metal oxide, and the material is deposited or adsorbed on at least one cover plate disposed between the wafer and the transparent wall part of the treatment chamber, so as to prevent the material from reaching the transparent wall part of said treatment chamber; and

removing the at least one cover plate from the treatment chamber, using an automatic handling device, after the thermal treatment of a semiconductor wafer and inserting a cover plate into said treatment chamber prior to a subsequent thermal treatment of a semiconductor wafer, wherein the handling device contacts the cover plate only on a surface facing away from the wafer.

63. (New) A method according to claim 62, wherein said at least one cover plate is removed from said treatment chamber and cleaned between substrate treatments.

64. (New) A method according to claim 62, wherein during the thermal treatment, at least one non-watery hydrogen containing process gas is introduced into said treatment chamber, for example prior to and/or after introduction of a mixture of hydrogen and water.

65. (New) A method according to claim 64, wherein the water content of the hydrogen/water mixture is controlled such that oxidation of the metal by the oxygen contained in the water, and a reduction of the resulting metal oxide, is substantially kept in equilibrium by the hydrogen.

66. (New) A method according to claim 65, wherein a proportion of water in the mixture is less than 20%, and in particular about 14%.

67. (New) A method for thermally treating semiconductor substrates having at least one structure in a process chamber by means of at least one thermal treatment cycle, wherein the structure has at least two different materials A, B, wherein said material A can form a first material a having a first component X, wherein such forming is described by a first equilibrium reaction

A + X <=> a + a' ; and

wherein said material B can form a second material b having a second component of a process gas Y, wherein such forming is described by a second equilibrium reaction

B + Y <=> b + b' ; whereby

a' and b' are optional reactants, and wherein during the thermal treatment, for at least an interval of time, at least one concentration of a component of the process gas X and/or Y, and at least a further process parameter, are chosen such that the first equilibrium reaction is displaced to the first material A and the second equilibrium reaction is displaced to the second material b, and wherein at least one concentration and/or a partial pressure of at least one component of the process gas X and/or Y is constantly changed as a function of the further process parameter.

68. (New) A method according to claim 67, wherein at least one gas flow meter is regulated or controlled as a function of the further process parameter, and/or by means of a pump device, the total pressure or a partial pressure within the process chamber is set.

69. (New) A method according to claim 67, wherein a second process gas having a defined composition is introduced into a volume, for example a variable volume, filled with a first process gas.

70. (New) A method according to claim 67, wherein the time interval is within one thermal treatment cycle, or extends over several thermal treatment cycles.

71. (New) A method according to claim 67, wherein the first equilibrium reaction substantially takes place within one thermal treatment cycle, and the second equilibrium reaction substantially takes place within another thermal treatment cycle.

72. (New) A method according to claim 67, wherein the further process parameter is the process temperature and/or a temperature ofa material a, b of the structure.

73. (New) A method according to claim 67, wherein the further process parameter comprises a further gas concentration of a component of the process gas, the pressure of the process gas, a partial pressure of a component of a process gas, a magnetic field of pre-determined strength, a portion of UV, or the combination of the aforementioned parameters that act upon the semiconductor substrates.

74. (New) A method according to claim 67, wherein the structure has horizontal layers with at least one material A or B, or the structure has vertical layers with at least one material A, B.

75. (New) A method according to claim 67, wherein the materials A, B are separated by at least one material C that is different from A and B, and/or wherein the second material b forms on the material B.

76. (New) A method according to claim 67, wherein the semiconductor substrate comprises a silicon wafer, a crystalline or amorphously grown or deposited semiconductor layer, a substrate or a layer of a IV-IV semiconductor, a II-VI semiconductor, or a III-V semiconductor.

77. (New) A method according to claim 67, wherein the first material A comprises a metal, and the second material comprises a semiconductor B.

78. (New) A method according to claim 77, wherein the metal of the first material A is covered by a metal oxide or metal nitride layer that comprises or forms the first material a and that can be formed, for example, by means of an equilibrium reaction.

79. (New) A method according to claim 77, wherein the semiconductor of the second material B is at least partially covered by an oxide, nitride or oxi-nitride layer that comprises or forms the second material b, and that can be formed, for example by means of a second equilibrium reaction.

80. (New) A method according to claim 67, wherein the first component X or the second component Y are the same or they at least comprise a same material, and/or wherein the optional reactants a', b' are the same or at least comprise the same material and/or wherein the first component X and the second component Y comprise water and/or wherein the reactants a', b' comprise hydrogen, and/or wherein the first and/or second component X, Y comprises a mixture of water and hydrogen or a mixture of water and oxygen.

81. (New) A method according to claim 67, wherein the first and/or second component X, Y comprises a first mixture of water and hydrogen or a second mixture of water and oxygen, and wherein during the thermal treatment, the first and /or the second component X ,Y is transferred from the first mixture into the second mixture, or vice versa.

82. (New) A method according to claim 67, wherein at least the material A and/or the second material b comprises a protection layer that is formed and/or maintained by means of a protection layer-forming reactive process gas component during the thermal treatment, and wherein said protection layer makes it possible, at least for a short time, to process the semiconductor substrate in parameter areas with regard to the concentration of the process gases and at least one further parameter, preferably the temperature of the semiconductor substrate,

In which the equilibrium reaction is displaced to the first material a and/or to the second material B.

83. (New) A method according to claim 82, wherein the process gas comprises ammonia, at least during part of the thermal treatment, and/or wherein the protection-layer-forming reactive process gas component comprises ammonia.

84. (New) A method according to claim 67, wherein at least one of the materials A, B or the materials a, b comprises tungsten, molybdenum, platinum, iridium, copper and/or the oxides or nitrides thereof, such as tungsten oxide and/or tungsten nitride.

85. (New) A method according to claim 67, wherein the thermal treatment is carried out in a process chamber of a rapid thermal processing unit, which is, for example, temperature-calibrated in a temperature range of between 930 and 950°C, with the temperature calibration making use of the layer grown from a tungsten nitride layer in ammonia.

86. (New) A method according to claim 67, wherein the process chamber comprises at least one covering device disposed between the semiconductor substrate and at least one process chamber wall for at least partially covering the process chamber wall.